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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/658,865 05/31/96 ADACHI H 960454

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ARMSTRONG WESTERMAN HATTORI
MCLELAND & NAUGHTON
SUITE 1000
1725 K STREET NW
WASHINGTON DC 20006

EXAMINER

KINCAID, L

ART UNIT

PAPER NUMBER

2745

17

DATE MAILED:

04/27/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

See attached.

Office Action Summary

Application No.
08/658,865

Applicant(s)

ADACHI

Examiner
Lester Kincaid

Group Art Unit
2745



☒ Responsive to communication(s) filed on Feb 24, 1999

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-17 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-17 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Response to Amendment

1. The amendment filed 2/24/99 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "said beacon signal is varied according to a transmission data amount received from said base station", as recited in **claim 17**.

Applicant is required to cancel the new matter in the reply to this Office action.

Claim Rejections - 35 USC § 112

2. **Claim 17** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "according to a transmission data amount received from the base station", is not clear. That is, what is the determining factor that dictates how the base station would vary the emanation interval of the beacon signal: The amount of data received by the particular mobile? An amount, which is transmitted to the mobile and received from the base? or Merely that all data transmitted by the base station, would in turn be received from the base station?

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Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. **Claims 5-7, 11-13 and 17** are rejected under 35 U.S.C. 102(b) as being anticipated by Tayloe et al. (U.S. Patent 5,373,506).

As to **claim 5**, Tayloe et al. disclose a radio communication system comprising:

an intermittent power-on type mobile for shifting to a power-on state synchronously with a received timing of a beacon signal (timeslot 0), with a fixed period of time after receiving the beacon signal being a data receive-ready period, see col. 1, lines 41-52, col. 2, lines 47-63 and Figs. 3-5; and

a base station for emanating a beacon signal to the intermittent type mobile and communicating with the mobile by radio while the mobile is controlled (to be in the power-on state) see col. 1, lines 41-52, col. 2, lines 47-63 and Figs. 3-6;

the base station varying an emanation interval of the beacon signal to the intermittent type mobile according to a transmission data amount to be transmitted to the mobile, the mobile varying a receiving timing shifting its power on state according to the emanation interval. See abstract, col. 3, line 34 through col. 4, line 24 and Figs. 3-6.

As to **claims 6 and 7**, Tayloe et al. disclose everything claimed as applied above to claim 5, in addition Tayloe et al. further discloses wherein the base narrows the interval when the

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transmission data amount increases (claim 6) and expands the interval when the transmission data amount reduces (claim 7). See abstract and col. 3, line 34 through col. 4, line 24.

As to **claims 11-13**, Tayloe et al. disclose everything claimed as applied above to claims 5-7, since the scope of each claim, merely corresponds to a part of the system of claim 5.

As to **claim 17**, as best understood by the examiner considering the indefiniteness cited above, Tayloe et al. disclose everything claimed as applied above to claims 5-7, in addition it is considered that all data transmitted by the base station, or "paging load" would in turn be received from the base station.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. **Claims 1 and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Leslie et al. (U.S. Patent 4,449,248) or the prior art admitted by the Applicant in view of Messenger (U.S. Patent 5,276,680).

As to **claim 1**, each of Leslie et al. and the Applicant disclose a (prior art) radio communication system comprising: an intermittent power-on type mobile for shifting to a power-on state synchronously with a received timing of a beacon signal, with a fixed period of time after receiving the beacon signal being a data receive-ready period; and a base station for emanating a

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period of the intermittent type mobile without any need to shorten an interval of occurrence of the beacon signal, as taught by Messenger, for the purpose of optimizing system latency by assuring that the base station transmits data to the intermittent type mobiles as soon and efficiently as possible.

Claim 8, reads on the base station as applied above to claim 1.

7. **Claims 2-4, 9-10 and 14-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dupont (U.S. Patent 5,535,207).

As to **claim 2**, Dupont discloses a radio communication system comprising:

an intermittent power-on type mobile for shifting to a power-on state synchronously with a received timing of a beacon signal, with a fixed period of time after receiving the beacon signal being a data receive-ready period (see col. 1, lines 42-56 and/or any pattern of Fig.2); and

a base station for emanating a beacon signal to the intermittent type mobile and communicating with the mobile by radio while the mobile is controlled (to be in the power-on state), (see col. 4, lines 24-28 and col. 2, lines 35-42);

the base station reporting information to the intermittent type mobile, (see col. 7, lines 31-35);

the intermittent mobile adjusting its power-on state to receive all pieces of data transmitted continuously from the base station, see col. 2, lines 34-42.

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beacon signal to the intermittent type mobile and communicating with the mobile by radio while the mobile is controlled (to be in the power-on state). Each teach regular emanation of the beacon, and thus no need to shorten an interval of occurrence of the beacon signal. See Leslie et al. col. 1, lines 48-66 and Applicant's admission from page 1, line 25 through page 3, line 8 and Figs. 21-22 of the specification. Each disclosure fails to explicitly recite wherein the base station preferentially transmits data to the intermittent type mobile over a normal mobile in a normally powered on state, when the data to be transmitted to the intermittent type mobile exists during the data receive-ready period.

In an analogous art, Messenger discloses wherein a base station separates data to be transmitted to a normal type station in a normally powered on state from data to be transmitted to an intermittent type mobile station, wherein the base station preferentially transmits data to the intermittent type mobile over a normal mobile in a normally powered on state, when the data to be transmitted to the intermittent type mobile exists during the data receive-ready period without any need to shorten an interval of occurrence of the beacon signal, for the (implied) purpose of optimizing system latency by assuring that the base station transmits data to the intermittent type mobiles as soon and efficiently as possible. See col. 6, lines 10-39 and col. 8, lines 12-21. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify either prior art system by specifically operating the base station to preferentially transmit data to the intermittent type mobile over a normal mobile in a normally powered on state, when the data to be transmitted to the intermittent type mobile exists during the data receive-ready

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Dupont fails to explicitly recite wherein the information reported from the base station to the intermittent type mobile includes "time extension information" that data must be received beyond the data receive-ready period and that the intermittent mobile sustains its power-on state until all pieces of the data transmitted continuously from the base are received, when the mobile has received time extension information from the base. However, given that when information to be transmitted to the mobile would exceed the amount of time available in the fixed (current) receive-ready period (such as line 5 of Fig.2), the transmission could clearly not be completed to the mobile in the receive-ready period, thereby increasing message latency, and that Dupont teaches the concept of reducing latency (when desired) of delivering messages, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Dupont by specifically programming the base station to report, as time extension information, that data must be received beyond the data receive-ready period, when data is transmitted continuously beyond the period wherein the mobile sustains its power-on state until all pieces of the continuously transmitted data are received, in response thereto, to thereby provide the user of the mobile the information necessary to reduce latency of transmitted messages regardless of their length, as suggested by Dupont in Fig.2.

As to **claim 3**, Dupont discloses a radio communication system comprising:

an intermittent power-on type mobile for shifting to a power-on state synchronously with a received timing of a beacon signal, with a fixed period of time after receiving the beacon signal being a data receive-ready period (see col. 1, lines 42-56 and/or any pattern of Fig.2); and

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a base station for emanating a beacon signal to the intermittent type mobile and communicating with the mobile by radio while the mobile is controlled (to be in the power-on state), (see col. 4, lines 24-28 and col. 2, lines 35-42);

the base station previously reporting transmission information , (see col. 7, lines 31-35) and transmitting the data within a predetermined period of time after completion of the (initial) data receive-ready period when data included in the transmission can not be transmitted during the receive-ready period (reads on extending the active time slot length, as shown in Fig.2, key patterns 9-11);

the intermittent mobile sustaining its power-on state when (received) data included the transmission data previously reported, and then extending the data receive-ready period by the predetermined period of time (Fig. 2, last row, for example). See also, col. 5, lines 10-19, col. 6, lines 7-27 and col. 8, lines 1-38.

Dupont fails to explicitly recite wherein the information transmitted from the base station to the intermittent type mobile includes information regarding data to be transmitted to the intermittent power-on type mobile during the data receive-ready period. However, given that when information to be transmitted to the mobile exceeded the amount of time available in the fixed (current) receive-ready period (such as line 5 of Fig.2), the transmission could clearly not be completed to the mobile in the receive-ready period, thereby increasing message latency, and that Dupont teaches the concept of reducing latency (when desired) of delivering messages, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify

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the system of Dupont by specifically programming the base station to transmit information including information regarding data to be transmitted to the intermittent power-on type mobile during the data receive-ready period to thereby provide the user of the mobile the information necessary to reduce latency of transmitted messages regardless of their length, as suggested by Dupont in Fig.2.

As to **claim 4**, Dupont, as modified above with respect to claim 3, discloses everything claimed and additionally discloses wherein the mobile shifts to its power-off state when all data has been received. See Fig.2.

As to **claims 9-10 and 14-16**, the modified system of Dupont discloses everything claimed as applied above to claims 2-3, since the scope of each claim, merely corresponds to a part of the system of claims 2-3

8. **Claims 2-4, 9-10 and 14-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaskill (U.S. Patent 5,629,940).

As to **claim 2**, Gaskill discloses a radio communication system comprising:

an intermittent power-on type mobile for shifting to a power-on state synchronously with a received timing of a beacon signal, with a fixed period of time after receiving the beacon signal being a data receive-ready period (time slot A, Fig.3), see col. 1, lines 46-61, col. 2, lines 12-29; and

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a base station for emanating a beacon signal to the intermittent type mobile and communicating with the mobile by radio while the mobile is controlled (to be in the power-on state), see col. 5, lines 61-67;

the base station reporting as time extension information that data must be received beyond the data receive-ready period, to the intermittent type mobile, when data is transmitted continuously beyond the data receive-ready period, see col. 4, lines 5-13 and col. 6, lines 9-10;

the intermittent mobile sustaining its power-on state (in all designated periods) until all pieces of the data transmitted from the base are received, when the mobile has received time extension information from the base, see col. 4, lines 13-51. Gaskill fails to explicitly recite an embodiment wherein the transmitted (message) data is continuously directed to a particular mobile, wherein the mobile (continuously) sustains its power-on state. It is considered that although the specific examples shown by Gaskill (Figs. 4 and 8) teach the ability to transmit and receive long message data in noncontiguous time frames, thus allowing for more freedom and flexibility, at the expense of system complexity, in transmitting long messages, it would have been obvious to one of ordinary skill in the art at the time the invention was made to send the data continuously wherein the mobile would (continuously) sustain its power-on state, for the purpose of reducing the overhead associated with the added complexity of the system.

As to **claim 3**, Gaskill discloses a radio communication system comprising:

an intermittent power-on type mobile for shifting to a power-on state synchronously with a received timing of a beacon signal, with a fixed period of time after receiving the beacon signal

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being a data receive-ready period (time slot A, Fig.3), see col. 1, lines 46-61, col. 2, lines 12-29;
and

a base station for emanating a beacon signal to the intermittent type mobile and communicating with the mobile by radio while the mobile is controlled (to be in the power-on state), see col. 5, lines 61-67;

the base station previously reporting transmission information, regarding data to be transmitted to the mobile during the ready period and transmitting the data within a predetermined period of time after completion of the data receive-ready period when data included in the transmission can not be transmitted during the receive-ready period, see col. 4, lines 5-13 and col. 6, lines 9-10; .

the intermittent mobile sustaining its power-on state (in all designated periods), when (received) data included the transmission data previously reported, and then extending the data receive-ready period by the predetermined period of time. Gaskill fails to explicitly recite an embodiment wherein the transmitted (message) data is continuously directed to a particular mobile, wherein the mobile (continuously) sustains its power-on state. It is considered that although the specific examples shown by Gaskill (Figs. 4 and 8) teach the ability to transmit and receive long message data in noncontiguous time frames, thus allowing for more freedom and flexibility, at the expense of system complexity, in transmitting long messages, it would have been obvious to one of ordinary skill in the art at the time the invention was made to send the data

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continuously wherein the mobile would (continuously) sustain its power-on state, for the purpose of reducing the overhead associated with the added complexity of the system.

As to **claim 4**, Gaskill, as modified above with respect to claim 3, discloses everything claimed and additionally discloses wherein the mobile shifts to its power-off state when all data has been received. See col. 4, lines 39-43 and Fig. 3.

As to **claims 9-10 and 14-16**, the modified system of Gaskill discloses everything claimed as applied above to claims 2-3, since the scope of each claim, merely corresponds to a part of the system of claims 2-3

Response to Arguments

9. Applicant's arguments filed 2/24/99 have been fully considered but they are not persuasive.

Regarding claims 5-7, and 11-13, it is logically considered that "paging load", as used by Tayloe et al. only refers to a data amount "to be transmitted" to the mobile stations. It is further considered that all such data is "transmitted", as broadly claimed, to each mobile in the system, each mobile then determining what particular data is "addressed" to it, for selectively receiving.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the mechanics of how the value of DRX is dynamically adjusted, or a direct variation) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from

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the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

It is further noted that the examiner is unaware of any "Fig. 2C of the instant application".

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding applicant's remarks toward Leslie et al., the examiner maintains that Leslie et al. meets the broadly claimed limitation requiring "an intermittent power-on type mobile for shifting to a power-on state synchronously with a received timing of a beacon signal". Any differences in implementation are simply not claimed.

Regarding applicant's remarks toward Messenger, the examiner urges applicant to read the cited passages (col. 6, lines 10-39 and col. 8, lines 12-21) in their entirety, (not just col. 6, lines 10-24).

Regarding Applicant's response to the rejections based on Dupont and Gaskill, in the absence of any facts showing unexpected results or operation obtained by the instant invention from the minor differences, as indicated above, the examiner maintains that the modifications, as applied above would have been obvious to one of ordinary skill in the art for the reasons applied above.

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Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lester G. Kincaid whose telephone number is (703) 306-3016. The examiner can normally be reached on Monday through Friday (first week of bi-week) and Tuesday through Friday (second week of the bi-week) from 7:30 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reinhard Eisenzopf, can be reached at (703) 305-4711.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this final action should be mailed to:

Box AF

Commissioner of Patents and Trademarks
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or faxed to:

(703) 308-9051, (for formal communications; please mark "EXPEDITED
PROCEDURE")

Or:

(703) 305-9508 (for informal or draft communications, please label
"PROPOSED" or "DRAFT" and mark "PLEASE DELIVER TO
EXAMINER")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal
Drive, Arlington, VA., Sixth Floor (Receptionist).


LGK/lgk
April 13, 1999


4/24/99
NGUYEN VO
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